[DOCUMENT] CLAIM

[Claim 1]

A method for producing a triarylsulfonium salt represented by the general formula [4]:

$$\begin{array}{cccc}
& & & & \\
& & & & \\
R - S & & & A_1 & & [4]
\end{array}$$

wherein, two R¹'s represent each hydrogen atom, halogen atom, alkyl group, lower haloalkyl group, alkoxy group, acyl group, hydroxyl group, amino group, nitro group or cyano group; R represents an aryl group which may have a substituent selected from a halogen atom, an alkyl group, a lower haloalkyl group, an alkoxy group, an alkylthio group, a N-alkylcarbamoyl group and a carbamoyl group, and the above substituent is different from one represented by the above R¹; and A₁ represents a strong acid residue,

comprising reacting a diaryl sulfoxide represented by the general formula [1]:

$$R^{1} \xrightarrow{\parallel} R^{1} \qquad [1]$$

wherein, R1 represents the same as above,

and an aryl Grignard reagent represented by the general formula [2]: RMgX [2]

wherein, X represents a halogen atom; R represents the same as above, in the presence of an activator with high affinity for oxygen of 3 to 7.5 equivalents relative to the above diaryl sulfoxide, and then reacting the resultant reaction mixture with a strong acid represented by the general formula [3]: HA₁ [3]

wherein, A₁ represents the same as above,

or a salt thereof.

[Claim 2]

The method according to claim 1, wherein the activator with high affinity for oxygen is a halogenotriorganosilane.

[Claim 3]

The method according to claim 1, wherein the activator with high affinity for oxygen is a halogenotrialkylsilane.

[Claim 4]

The method according to claim 1, wherein the activator with high affinity for oxygen is chlorotrimethylsilane.

[Claim 5]

The method according to claim 1, wherein the amount of use of an activator with high affinity for oxygen is 1.2 to 3 equivalents relative to the aryl Grignard reagent represented by the general formula [2].

[Claim 6]

The method according to claim 1, wherein a strong acid residue represented by A₁ is an anion derived from a hydrohalic acid represented by the general formula [5]:

HX_1 [5]

wherein, X1 represents a halogen atom,

a sulfonic acid represented by the general formula [6]:

$R^2 - SO_3H$ [6]

wherein, R² represents an alkyl group, an aryl group or an aralkyl group, which may have a halogen atom, or a camphor group,

or an inorganic strong acid represented by the general formula [7]: HM_1Fn [7]

wherein, M_1 represents a metalloid atom; and n represents 4 or 6. [Claim 7]

The method according to claim 6, wherein X_1 is a chlorine atom or a bromine atom.

[Claim 8]

The method according to claim 6, wherein the metalloid atom represented by M_1 is a boron atom, a phosphorus atom, an arsenic atom or an antimony atom.